TABLE 1-1: Chronology of Events and Site Investigations Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

DATE	EVENT
1912 – mid/late 1920s	Spicer Manufacturing Company operated a manufacturing plant on the Site; most of the major structures were erected by 1918.
1936 – 1962	CDE facility in operation, manufacturing of electronic components including capacitors led to disposal of PCB-contaminated materials and other hazardous substances directly on the facility soils.
1962 – 2007	CDE vacated the facility and the facility operated as a rental property housing a variety of commercial and light industrial tenants.
1986	NJDEP began investigation of the environmental conditions at the former CDE facility. Preliminary sampling by the NJDEP and the USEPA showed the presence of elevated concentrations of PCBs, VOCs, and inorganic chemicals in facility soils, sediments, and surface water.
1997	The USEPA conducted a preliminary investigation of Bound Brook and collected surface soil and interior dust samples from nearby residential and commercial properties. These investigations lead to fish consumption advisories for Bound Brook and its tributaries.
March 1997	USEPA ordered D.S.C. of Newark Enterprises, Inc. (DSC), the owner of the facility property, to perform a removal action associated with contaminated soil and surface water runoff from the facility. The removal action included paving driveways and parking areas in the industrial park, installing a security fence, and implementing drainage controls.
1998	The Site was added to the National Priorities List as a result of the 1997 sampling activities. The USEPA initiated a removal action to address PCBs in interior dust at houses to the west and southwest of the facility.
1998- 2000	The USEPA ordered CDE and DSC to implement removal actions to address PCBs in soils at six residential properties in 1998. In 1999, the USEPA ordered CDE and Dana Corporation to implement removal actions to address seven additional properties that were located to the west and southwest of the facility.
2000	Foster Wheeler, Inc. conducted an RI that included the collection of soil, sediment, and building surface samples, as well as the installation and sampling of 12 shallow bedrock monitoring wells. The USEPA then divided the Site into four OUs: OU1 addresses residential, commercial, and municipal properties in the vicinity of the former CDE facility, OU2 addresses former CDE facility soils and buildings, OU3 addresses groundwater, and OU4 addresses the Bound Brook.

TABLE 1-1: Chronology of Events and Site Investigations Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

DATE	EVENT
2001	USEPA issued the RI and FS for OU1.
September 30, 2003	USEPA signed a Record of Decision (ROD) to address OU1. The selected remedy included the removal of approximately 2,100 cubic yards of contaminated soils from approximately 16 residential, commercial, and municipal properties, as well as indoor dust remediation where PCB contaminated dust was identified. The remedy includes additional sampling within a defined study area identifying the specific properties in need of remediation.
April 2004	The FS for OU2 was issued.
September 2004	The ROD for OU2 was issued. The remedy specified in the ROD included excavation of an estimated 107,000 cubic yards of contaminated soil, on-site treatment of excavated soils, transportation of contaminated soil and debris not suitable for LTTD treatment, excavation of an estimated 7,500 cubic yards of contaminated soil and debris from the CDA and transporting for off-site disposal, installation of a multilayer cap or hardscape, installation of engineering controls, property restoration, and implementation of institutional controls.
November 2006	USEPA began implementing the OU2 ROD with the relocation of facility tenants at the industrial park and began demolition of the 18 buildings.
December 2007	Scope of work for OU3 RI/FS was transmitted to Malcolm Pirnie, Inc.
May 2008	Building demolition completed.
January 2008	Eight deep bedrock wells were installed by USEPA to assess the hydraulic properties of the fractured bedrock and water quality of the bedrock groundwater up- and down-gradient of the former CDE facility. Groundwater samples were collected for VOCs from multiple depths and also were taken from 12 existing shallow bedrock monitoring wells located at the former CDE facility. Initial testing indicated the presence of chlorinated VOCs in 11 of the 12 shallow bedrock wells.
May – July 2008	Interior dust and/or soil samples were collected from residential properties adjacent to the former CDE facility.
October 2008	A Final Remedial Investigation/Feasibility Study Work Plan for OU3 and Final Site-Wide Site Safety and Health Plan for All Operable Units were submitted to the USEPA.
December 2008	A Final Field Sampling Plan was submitted to the USEPA.
December 2008	A Draft Technical Memorandum with Recommendations for OU1 Soil and Interior Dust was submitted to the USEPA.

TABLE 1-1: Chronology of Events and Site Investigations Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

DATE	EVENT
January 2009	A Final Data Characterization Report for the OU1 Soil and Interior Dust Sampling conducted in May – July 2008 was submitted to the USEPA.
January – June 2009	Malcolm Pirnie performed rock core sampling and analyses to assess the presence of VOCs and PCBs in the rock matrix and completed borehole drilling and installation of temporary FLUTe liners for future monitoring wells.
April 2009	Excavation and treatment of contaminated soils begins.
May – June 2009	Malcolm Pirnie carried out FLUTe liner drop tests to assess hydraulic properties of fractured bedrock zones and completed borehole geophysics.
September – October 2009	Malcolm Pirnie installed FLUTe multi-port monitoring wells to record hydraulic heads and to obtain groundwater samples from fractured bedrock zones.
October 2009	Malcolm Pirnie performed the first sampling event, recording water levels and collected groundwater samples from all monitoring wells.
March 2010	Malcolm Pirnie performed the second sampling event, recording water levels and collected groundwater samples from all monitoring wells, plus select wells for PCB congeners, Dioxins, and Furans.
June 2010	Malcolm Pirnie completed an integrated pumping test to further characterize the source term in bedrock, and to characterize anisotropic groundwater movement in the Passaic Formation at the Site. This included an 8 hour step rate drawdown test, two 48 hour constant rate pumping tests, and the collection of water quality samples from pumping effluent to characterize the mass discharge over time (VOCs, PCBs, physical parameters)
July 2010	Malcolm Pirnie performed the third sampling event, recording water levels from all monitoring wells and collected groundwater samples from select wells for PCB congeners, dioxins, and furans.
September – November 2010	Malcolm Pirnie completed borehole drilling, carried out FLUTe liner drop tests to assess hydraulic properties of fractured bedrock zones and completed borehole geophysics for additional monitoring well MW-23.
October 2010 – August 2012	OU4 RI fieldwork was conducted
December 2010	Malcolm Pirnie completed installation of temporary FLUTe liner in MW-23, conducted first sampling event on MW-23.
March 2011	Malcolm Pirnie conducted second sampling event on MW-23.
March 2011	Draft Planning Documents for OU1 Phase 2 Screening Level Sampling were submitted to the USEPA.

TABLE 1-1: Chronology of Events and Site Investigations Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

DATE	EVENT
May – August 2011	Phase 2 screening level soil and confirmatory dust samples collected from residential properties proximal to the former CDE facility.
September 2011	Final Planning Documents for OU1 Phase 2 Screening Level Sampling were submitted to the USEPA.
November 2011 – March 2012	Confirmatory samples collected from the first 8 OU1 design properties.
December 2011	Excavation of contaminated soils substantially complete.
March – July 2012	Post-excavation samples for the second 9 OU1 design properties collected.
April 2012	Installation of the storm water system, final paving activities and site restoration complete.
April 2012	Final Data Characterization Report for Phase 2 OU1 Soil and Interior Dust Sampling submitted to USEPA.
April 2012	Memo summarizing confirmatory results for first 8 OU1 design properties submitted to USEPA.
May 2012	The final design for the first set of OU1 properties was submitted to USEPA.
June 2012	The Final RIR, FS, BHHRA, and Technical Impracticability Waiver for OU3 were issued.
September 2012	The ROD for OU3 was issued. The remedy specified in the ROD included long-term monitoring of groundwater, with potential hydraulic control deferred to the OU4 remedy based on the results of the OU4 RI .
November 2012	The Final Design for the second set of OU1 properties was submitted to USEPA

TABLE 4-1: Precipitation Frequency Estimates with 90% Confidence Intervals (in inches)
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Duration	Average Recurrence Interval (Years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.335** (0.305-0.368)	**0.399** (0.364-0.438)	**0.472** (0.429-0.519)	**0.525** (0.477-0.577)	**0.59** (0.533-0.647)	**0.635** (0.571-0.696)	**0.68** (0.608-0.746)	**0.72** (0.641-0.790)	**0.77** (0.679-0.847)	**0.807** (0.707-0.890)
10-min	**0.534** (0.488-0.588)	**0.638** (0.582-0.701)	**0.756** (0.687-0.831)	**0.839** (0.762-0.923)	**0.94** (0.849-1.03)	**1.01** (0.909-1.11)	**1.08** (0.966-1.19)	**1.14** (1.01-1.25)	**1.22** (1.07-1.34)	**1.27** (1.11-1.40)
15-min	**0.668** (0.610-0.735)	**0.801** (0.731-0.881)	**0.956** (0.869-1.05)	**1.06** (0.964-1.17)	**1.19** (1.08-1.31)	**1.28** (1.15-1.40)	**1.36** (1.22-1.50)	**1.44** (1.28-1.58)	**1.53** (1.35-1.69)	**1.59** (1.40-1.76)
30-min	**0.916** (0.836-1.01)	**1.11** (1.01-1.22)	**1.36** (1.24-1.49)	**1.54** (1.40-1.69)	**1.76** (1.59-1.94)	**1.93** (1.73-2.11)	**2.09** (1.87-2.29)	**2.24** (1.99-2.46)	**2.44** (2.15-2.68)	**2.58** (2.26-2.85)
60-min	**1.14** (1.04-1.26)	**1.39** (1.27-1.53)	**1.74** (1.58-1.92)	**2** (1.82-2.20)	**2.35** (2.12-2.58)	**2.61** (2.35-2.87)	**2.88** (2.58-3.16)	**3.14** (2.80-3.45)	**3.5** (3.08-3.85)	**3.77** (3.30-4.16)
2-hr	**1.4** (1.26-1.55)	**1.7** (1.54-1.89)	**2.16** (1.95-2.39)	**2.51** (2.27-2.79)	**3.01** (2.69-3.32)	**3.41** (3.04-3.77)	**3.83** (3.39-4.23)	**4.26** (3.74-4.71)	**4.87** (4.22-5.39)	**5.35** (4.61-5.94)
3-hr	**1.56** (1.41-1.73)	**1.9** (1.72-2.11)	**2.41** (2.18-2.68)	**2.81** (2.54-3.12)	**3.36** (3.02-3.73)	**3.82** (3.40-4.22)	**4.28** (3.79-4.74)	**4.77** (4.19-5.29)	**5.45** (4.73-6.05)	**5.99** (5.16-6.67)
6-hr	**2** (1.81-2.23)	**2.43** (2.20-2.70)	**3.08** (2.78-3.41)	**3.61** (3.25-3.99)	**4.37** (3.89-4.81)	**5** (4.43-5.50)	**5.68** (4.98-6.24)	**6.41** (5.57-7.04)	**7.46** (6.39-8.21)	**8.33** (7.05-9.17)
12-hr	**2.47** (2.24-2.75)	**3** (2.71-3.33)	**3.82** (3.45-4.24)	**4.51** (4.06-5.00)	**5.54** (4.93-6.11)	**6.42** (5.67-7.06)	**7.38** (6.45-8.11)	**8.45** (7.29-9.29)	**10** (8.49-11.0)	**11.4** (9.49-12.5)
24-hr	**2.79** (2.58-3.04)	**3.38** (3.13-3.68)	**4.34** (4.01-4.72)	**5.16** (4.74-5.61)	**6.39** (5.84-6.93)	**7.46** (6.76-8.09)	**8.65** (7.76-9.38)	**9.97** (8.85-10.8)	**12** (10.4-13.0)	**13.7** (11.8-15.0)

Notes:

Data source: NOAA Atlas 14 Volume 2 Version 3.0

Precipitation frequency estimates in this table are based on frequency analysis of partial duration series. Please refer to NOAA Atlas 14 document for more information.

Bold numbers are precipitation frequency estimates in inches for a given duration and average recurrence interval. Numbers in parenthesis are precipitation frequency estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation estimates and may be higher than currently valid probable maximum precipitation values.

TABLE 5-1: Sediment Probing Depths
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	Sample Count	Quantiles - Sediment Probing Depth (feet)						
		Minimum	10%	25%	Median (50%)	75%	90%	Maximum
River Mile 0.0 to River Mile 1.0	106	0.17	1	1.875	3	4	4.5	6.5
River Mile 1.0 to River Mile 2.0	106	0	0	0.65	2	3.5	5	6.5
River Mile 2.0 to River Mile 3.4	143	0	0.5	1	1.5	2	3	4.9
New Market Pond - West of Washington Avenue	20	0.3	1.5	1.525	2.4	2.95	3.99	4
New Market Pond - East of Washington Avenue	43	1	2	3	4	5	5.5	7.2
River Mile 4.1 to River Mile 5.0	99	0	0.2	0.5	1.5	2.5	3	6.5
River Mile 5.0 to River Mile 6.0	111	0	0.5	1.3	2.5	4	4.9	6
River Mile 6.0 to River Mile 6.8	94	0	0	0.2	0.5	1.5	2.25	5

Notes:

Probing depth is measured as the depth below the sediment surface where refusal was encountered or where the probe rod was not long enough to accommodate the water depth, hence refusal was not encountered (refer to triangle symbols in Figure 5-1).

Probing depth was measured using a 0.5 inch diameter graduated copper rod.

Quantiles were calculated using JMP Version 9.0.3.

Quantiles are equally-spaced points on a cumulative distribution curve; the 50 percent quantile is equal to the median of the dataset.

TABLE 5-1: Penetration and Recoveries for Manually Collected Low Resolution Sediment Cores
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	Probe Penetration Depth (inches)	Core Penetration Depth (inches)	Core Recovery Length (inches)	Core Percent Recovery
GB-SHEP-A	30	22	22	100%
GB-SHEP-B	60	60.5	55	91%
GB-BEECH-A	60	62	20	32%
GB-BEECH-B	78	77.5	20	26%
GB-GREEN-A	72	66.5	57	86%
GB-GREEN-B	48	44	39	89%
GB-GREEN-C	36	34	32.5	96%
BB-T3A	9	9.5	7	74%
BB-T3B	24	22.75	19.5	86%
BB-T29A	36	35.25	27	77%
BB-T29B	18	16	10.5	66%
BB-T55A	60	38.75	31	80%
BB-T55B	38	29	26	90%
BB-T75A	54	45	35	78%
BB-T75B	66	56	37	66%
BB-T115A	48	27.75	20.5	74%
BB-T115B	38	22	18.5	84%
BB-RM2.48B	30	29.5	22	75%
BB-T136A	42	38	27	71%
BB-T136B	42	34	28.5	84%
BB-T156A	18	17	13	76%
BB-T156B	NR	21.75	19	87%
BB-RM3.03A	24	25.5	24	94%
BB-T180A	42	46	37	80%
BB-T180B	36	39	29	74%
BB-T217A	42	42	36	86%
BB-T217B	NR	55.75	45	81%
BB-T231A	66	76.75	60	78%
BB-T231B	60	53.25	37	69%
BB-T231C	72	68	42	62%
BB-T255A	36	32	27	84%
BB-T255B	18	33	10	30%
BB-T267A	24	25	18	72%
BB-T267B	12	8	6	75%
BB-T282A	12	16.5	11.5	70%
BB-T282B	9	9	8	89%
BB-T304A	60	45.5	33.5	74%
BB-T304B	NR	26	11	42%
BB-T309A	54	32.5	25.5	78%
BB-T309B	48	27	22.5	83%

Notes
N/A = Not Applicable
NR = Not Recorded

TABLE 5-1: Penetration and Recoveries for Manually Collected Low Resolution Sediment Cores
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	Probe Penetration Depth (inches)	Core Penetration Depth (inches)	Core Recovery Length (inches)	Core Percent Recovery
BB-T319A	18	15.5	11	71%
BB-T319B	36	29	19.5	67%
BB-T323A	10	7	6	86%
BB-T323B	12	14	13.75	98%
BB-T328A	6	N/A	N/A	N/A
BB-T328B	36	27	17	63%
BB-T333A	12	11.5	7	61%
BB-T333B	0	N/A	N/A	N/A
BB-T337A	NR	NR	11	--
BB-T337B	NR	NR	7	--
BB-T339A	NR	NR	10	--
BB-T339B	NR	NR	6	--
BB-T344A	9	11	9	82%
BB-T344B	9	7	5	71%
BB-T346A	NR	NR	6	--
BB-T346B	NR	NR	5	--
BB-T348A	24	17.5	13	74%
BB-T348B	42	38	33	87%
BB-T350A	NR	NR	13	--
BB-T350B	NR	NR	9	--
BB-T353A	36	57.5	46.5	81%
BB-T353B	36	29.25	25	85%
BB-T363A	12	11.5	10	87%
BB-T363B	12	12	10	83%
BB-RM7.11A	54	46	33	72%
BB-RM7.11B	NR	49.5	35.5	72%
BB-RM7.33A	72	69	49	71%
BB-RM7.33B	54	47	36	77%
BB-RM7.41A	NR	36	31	86%
BB-RM7.41B	24	24	24	100%
BB-RM7.55A	36	46	41.5	90%
BB-RM7.55B	33	48	44.5	93%
BB-RM8.1A	78	85	76	89%
BB-RM8.1B	78	47.5	30	63%
BB-RM8.3A	60	58.25	31.5	54%
BB-RM8.3B	60	31.75	29	91%
TRB-ELSIE	18	13	13	100%
TRB-NEWBRUN	24	30.5	26.5	87%
TRB-SPRING	NR	18.5	16	86%

Notes
N/A = Not Applicable
NR = Not Recorded

Locations BB-T328A and BB-T333B were collected as surface sediment grab samples due to shallow depth of refusal.

TABLE 6-1: Be7 Radiological Results for "Recently-Deposited" Sediments
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Sample ID	River Mile	Sampling Event	Location Description	Be-7 (pCi/g)
CDEOU4-110412-HRA0006	4	April 2011 High Resolution Core Top	New Market Pond - East Side	3.44
CDEOU4-110419-ED18	0.15	April 2011 Surface Sediment	Upstream of Bound Brook confluence with Green Brook	1.51
CDEOU4-110419-ED15	1.29	April 2011 Surface Sediment	Lincoln Avenue Bridge	4.69
CDEOU4-110419-ED12	2.59	April 2011 Surface Sediment	Lehigh Avenue	0.567
CDEOU4-110419-ED11	2.85	April 2011 Surface Sediment	Downstream of Prospect Avenue Bridge	6.38
CDEOU4-110418-ED09	3.44	April 2011 Surface Sediment	New Market Pond - West Side	6.07
CDEOU4-110418-ED08	4.38	April 2011 Surface Sediment	Upstream of New Market Pond	0.648
CDEOU4-110418-ED06	4.75	April 2011 Surface Sediment	Upstream of New Brunswick Avenue	1.52
CDEOU4-110418-ED07	4.85	April 2011 Surface Sediment	Upstream of New Brunswick Avenue	2.07
CDEOU4-110418-ED04	5.72	April 2011 Surface Sediment	Near Bound Brook confluence with Cedar Brook	7.99
CDEOU4-110418-ED02	6.65	April 2011 Surface Sediment	Upstream of Twin Culverts	1.28
CDEOU4-111129-ST39	-1.57	November 2011 Sediment Trap	Green Brook - Shepherd Avenue Bridge	6.39
CDEOU4-111130-ST50	0.41	November 2011 Sediment Trap	Bound Brook Bridge	4.61
CDEOU4-111212-ST53	2.17	November 2011 Sediment Trap	South Avenue Bridge	4.67
CDEOU4-111212-ST64	3.42	November 2011 Sediment Trap	New Market Pond Dam	3.78
CDEOU4-111212-ST59	4.38	November 2011 Sediment Trap	Upstream of New Market Pond	0.519
CDEOU4-111130-ST26	4.66	November 2011 Sediment Trap	Unnamed Tributary near New Brunswick Avenue	3.62
CDEOU4-111130-ST54	4.83	November 2011 Sediment Trap	Upstream of New Brunswick Avenue	0.898
CDEOU4-111130-ST62	5.34	November 2011 Sediment Trap	Clinton Avenue Bridge	3.29
CDEOU4-111212-ST32	5.54	November 2011 Sediment Trap	Unnamed Tributary near Elsie Avenue	4.1
CDEOU4-111129-ST36	6.02	November 2011 Sediment Trap	Manmade Dam	2.24
CDEOU4-111212-ST30	6.05	November 2011 Sediment Trap	Cedar Brook downstream of Spring Lake Spillway	7.65
CDEOU4-111212-ST19	6.8	November 2011 Sediment Trap	Belmont Avenue Bridge	2.07
CDEOU4-111129-ST25	8.35	November 2011 Sediment Trap	Talmadge Road Bridge	0.556
CDEOU4-111116-ED39	-1.51	November 2011 Surface Sediment	Green Brook - Shepherd Avenue Bridge	9.55
CDEOU4-111121-EZ46	-0.07	November 2011 Surface Sediment	Green Brook - Downstream of Confluence with Bound Brook	1.11
CDEOU4-111121-ED42	0.01	November 2011 Surface Sediment	Green Brook - Upstream of Confluence with Bound Brook	2.3
CDEOU4-111121-ED50	0.42	November 2011 Surface Sediment	Bound Brook Bridge	9.49
CDEOU4-111121-ED53	2.19	November 2011 Surface Sediment	South Avenue Bridge	0.604
CDEOU4-111122-ED59	4.38	November 2011 Surface Sediment	Upstream of New Market Pond	1.62
CDEOU4-111115-ED26	4.66	November 2011 Surface Sediment	Unnamed Tributary near New Brunswick Avenue	6.58
CDEOU4-111122-ED54	4.83	November 2011 Surface Sediment	Upstream of New Brunswick Avenue	9.38
CDEOU4-111122-ED62	5.36	November 2011 Surface Sediment	Clinton Avenue Bridge	6.78
CDEOU4-111115-ED32	5.54	November 2011 Surface Sediment	Unnamed Tributary near Elsie Avenue	0.805
CDEOU4-111115-ED30	6.02	November 2011 Surface Sediment	Cedar Brook downstream of Spring Lake Spillway	2.14
CDEOU4-111115-ED36	6.06	November 2011 Surface Sediment	Manmade Dam	5.04
CDEOU4-111114-ED19	6.8	November 2011 Surface Sediment	Belmont Avenue Bridge	3.72
CDEOU4-111114-EZ20	6.8	November 2011 Surface Sediment	Belmont Avenue Bridge - Duplicate of ED19	1.84
CDEOU4-111114-ED25	8.33	November 2011 Surface Sediment	Talmadge Road Bridge	14.2

Note:
Sample CDEOU4-110412-HRA0006 represents the average of samples HRA0003 and HRA0306 since both samples were Be-7 bearing and had a moisture content of approximately 70%.

TABLE 6-2: Summary of Contaminant Concentrations in "Recently-Deposited" Sediments
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	Number of Samples	Average (Range) Concentrations (mg/kg)													
		Total PCBs[1]	Arsenic	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Nickel	Silver	Zinc	LMW[2] PAHs	HMW[2] PAHs	Total[2] PAHs
Talmadge Road (RM8.3)	2	0.25	6.2	15	28	65	18,000	133	0.24	39	4.1	294	NA[3]	NA[3]	NA[3]
Belmont Avenue (RM6.8)	3	1.6	17	19	43	114	43,000	172	0.27	46	3.5	573	1.5	13	15
Adjacent to Former CDE Site at RM6.5[4]	1	41	18	19	32	85	20,000	191	0.29	35	3.9	400	2.2	3.7	5.9
Bound Brook (RM6.1 to RM3)	15	12 (1.4-24)	11 (1.7-21)	11 (1.7-21)	57 (11-146)	138 (27-250)	28,100 (6,300-56,000)	180 (28-317)	0.35 (0.04-0.64)	37 (8.7-63)	7.3 (1.1-16)	502 (92-909)	4.6 (3.6-5.8)	45 (28-56)	50 (31-61)
Bound Brook (RM3 to RM0)	8	1.8 (0.1-4.4)	6.4 (2.7-16)	4.1 (0.5-11)	28 (10-58)	72 (13-164)	15,800 (7,900-26,600)	79 (20-176)	0.13 (0.03-0.25)	27 (11-47)	1.6 (0.2-3.5)	252 (77-554)	3.6 (2.9-4.4)	35 (30-43)	39 (34-48)
Tributaries[5]	6	0.23 (0.03-0.38)	9.8 (2.8-26)	3.8 (0.5-7.3)	39 (11-79)	110 (28-217)	30,900 (11,500-61,100)	245 (61-716)	0.34 (0.05-0.78)	34 (9.5-66)	8.6 (0.1-30)	585 (119-1500)	NA[3]	NA[3]	NA[3]
Green Brook	3	0.27	3.8	0.93	22	34	15000	47	0.11	18	0.48	130	NA[3]	NA[3]	NA[3]
Green Brook (Upstream)	1	0.074	3.2	0.44	27	41	15000	60	0.122	16	0.16	125	NA[3]	NA[3]	NA[3]
Ambrose Brook[6]	7	0.033	8	0.55	25	26	27000	44	0.134	29	0.42	192	1.6	4.6	6.2
Lake Nelson[6]	3	0.301	9.1	1.8	40	104	34000	113	0.22	34	0.63	538	1.9	7.7	9.7

Notes:

[1]Total PCB concentration is the sum of detected Aroclor 1242, Aroclor 1254 and Aroclor 1260

[2]LMW PAHs = Low Molecular Weight PAHs, the concentration is the sum of detected Naphtalene, Acenaphthene, Acenaphthylene, Anthracene, Fluorene and Phenanthrene
HMW PAHs = High Molecular Weight PAHs, the concentration is the sume of detected Benz[a]anthracene, Chrysene, Fluoranthene, Pyrene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[j,k]fluoranthenes, Dibenz[ah]anthracene, Benzo[ghi]perylene and Indeno[1,2,3-cd]pyrene
Total PAHs = LMW PAHs + HMW PAHs

[3]NA - data not available

[4]Composite sample collected using petit ponar. The sample is not Be-7 bearing.

[5]Tributaries samples are from Cedar Brook, Elsie and Brunswick.

[6]Reference area. Samples are not Be-7 bearing

Numbers in parantheses indicate the range of concentrations

TABLE 6-3: Total PCB Concentration Reported by Method 1668 and Method 608
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Sample ID	Method 1668 Total PCB (ppb) Sum of Congeners	Method 608 Total PCB (ppb) Sum of Congeners	Method 1668 Calculated Total PCB (ppb) Sum of Aroclors	Method 608 Calculated Total PCB (ppb) Sum of Aroclors
ED19	610	590	560	590
ED39	720	670	700	640
ED42	74	74	78	79
ED36	17,000*	21,000	16,000*	18,000
ED53	5,800*	4,400	6,700*	4,600

Notes:

* = Data not surrogate-recovery corrected due to large dilution factor.

Total PCB Aroclor = Sum of Aroclors 1242, 1254 and 1260

TABLE 7-1: Known New Jersey Pollutant Discharge Elimination System (NJPDES) Permits for Bound Brook Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

NJPDES ID	Facility	Date of Flow Measurement	Flow (cfs)
NJ0034835.001A	Ferro Corporation (DMC-2)	4/1/11-4/30/11	0.218
NJG0029629.001A	Design and Molding Serv	2/1/11-4/30/11	0.078
NJG0130982.001A	Eco Pump Site (former)	1/1/11-3/31/11	0.022

TABLE 7-2: Porewater and Surface Water Total PCB Concentrations
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	River Mile	Sample	Depth Below Sediment-Water Interface (cm)	Total PCB (ng/L)
PW01	8.29	SW01	Surface Water	1.1
		PW01-0005	0-5	1.6
		PW01-3037	30-37	1.6
PW02	6.63	SW02	Surface Water	4.8
		PW02-0005	0-5	10
		PW02-3540	35-40	13
PW03	6.57	SW03	Surface Water	54
		PW03-0005	0-5	140
		PW03-3036	30-36	840
PW03 (Field Duplicate)	6.57	SW33	Surface Water	53
		PW33-0005	0-5	160
		PW33-30355	30-35.5	220
PW04 (Co-located with PW05)	6.54	SW04	Surface Water	11
		PW04-0005	0-5	32
		PW04-0510	5-10	64
		PW04-1520	15-20	78
		PW04-25325	25-32.5	220
PW05 (Co-located with PW04)	6.54	SW05	Surface Water	10
		PW05-0005	0-5	59
		PW05-4045	40-45	*58*
PW06 (Co-located with PW07)	6.48	SW06	Surface Water	52
		PW06-0005	0-5	150
		PW06-0510	5-10	570
PW07 (Co-located with PW06)	6.48	SW07	Surface Water	94
		PW07-0005	0-5	200
		PW07-1520	15-20	320
PW08	6.44	SW08	Surface Water	55
		PW08-0005	0-5	250
		PW08-0510	5-10	600
		PW08-1015	10-15	840
		PW08-1520	15-20	880
		PW08-2025	20-25	620
		PW08-2531	25-31	*1900*
PW09 (Co-located with PW10)	6.38	SW09	Surface Water	150
		PW09-0005	0-5	460
		PW09-0509	5-9	260
PW10 (Co-located with PW09)	6.38	SW10	Surface Water	100
		PW10-0005	0-5	660
		PW10-0510	5-10	1700
PW11	6.32	SW11	Surface Water	75
PW12	6.29	SW12	Surface Water	40
PW13 (Co-located with PW14)	6.26	SW13	Surface Water	150
		PW13-0005	0-5	*19000*
		PW13-1015	10-15	*52000*
PW14 (Co-located with PW13)	6.26	SW14	Surface Water	260
		PW14-0005	0-5	*12000*
		PW14-1018	10-18	*43000*
PW15	6.24	SW15	Surface Water	57
PW16 (Co-located with PW17)	6.21	SW16	Surface Water	88
		PW16-0005	0-5	270
		PW16-25295	25-29.5	*1200*
PW17 (Co-located with PW16)	6.21	SW17	Surface Water	72
		PW17-0005	0-5	140
		PW17-10145	10-14.5	940
PW18	6.16	SW18	Surface Water	55
		PW18-0005	0-5	90
		PW18-1015	10-15	80
PW19	6.15	SW19	Surface Water	66
		PW19-0005	0-5	430
		PW19-1015	10-15	960
PW20	5.8	SW20	Surface Water	110
		PW20-0005	0-5	250
		PW20-30345	30-34.5	170

Notes:

1. Total PCB represents the sum of congeners following Method 1668C.
2. Nondetects were incorporated into the summation as half the Reporting Limit.
3. Porewater and surface water concentrations were measured with *in-situ* passive samplers (deployed July 17th - July 19th, 2012; retrieved August 21st - August 24th, 2012). Reported PCB congener concentrations were corrected using internal C13-labeled performance recovery compounds (PRC) to estimate equilibrium aqueous concentrations. Italic concentrations represent samples where suitable PRCs were not available, and a larger uncertainty exists on the corrected Total PCB concentration.

TABLE 7-3: Total PCB Load Carried by Surface Water
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	River Mile	Sample	Total PCB (ng/L)	Base Flow (cfs)	Base Flow (L/day)	Total PCB Load Carried by Surface Water (mg/day)
PW01	8.29	SW01	1.1	--	--	--
PW02	6.63	SW02	4.8	1.04	2556589	12
PW03	6.57	SW03	54	1.08	2643462	143
PW03 (Field Duplicate)	6.57	SW33	53	1.08	2643462	140
PW04 (Co-located with PW05)	6.54	SW04	11	1.10	2686898	30
PW05 (Co-located with PW04)	6.54	SW05	10	1.10	2686898	27
PW06 (Co-located with PW07)	6.48	SW06	52	1.13	2773771	141
PW07 (Co-located with PW06)	6.48	SW07	94	1.13	2773771	261
PW08	6.44	SW08	55	1.16	2831686	156
PW09 (Co-located with PW10)	6.38	SW09	150	1.19	2918559	438
PW10 (Co-located with PW09)	6.38	SW10	100	1.19	2918559	292
PW11	6.32	Sw11	75	1.23	3005432	225
PW12	6.29	SW12	40	1.25	3048869	122
PW13 (Co-located with PW14)	6.26	SW13	150	1.26	3092305	464
PW14 (Co-located with PW13)	6.26	SW14	260	1.26	3092305	804
PW15	6.24	SW15	57	1.28	3121263	178
PW16 (Co-located with PW17)	6.21	SW16	88	1.29	3164700	278
PW17 (Co-located with PW16)	6.21	SW17	72	1.29	3164700	228
PW18	6.16	SW18	55	1.32	3237094	178
PW19	6.15	SW19	66	1.33	3251573	215
PW20	5.8	SW20	110	--	--	--
Average (RM6.15 to 6.48)			75	1.23	3017498	226
Standard Deviation (RM6.15 to 6.48)			30	0.07	173508	86

Note:
"--" indicates sample located outside the OU3 model groundwater boundary. Refer to Figure 7-4

TABLE 7-4: Estimated Groundwater Flux into Bound Brook Surface Water
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	Magnitude	Flow (K) ft/day	Gradient (i) ft/ft	Area (A) ft^2	Flux (Q) ft^3/d	Flux (Q) gal/day
Reach 1	low	2.2	0.00732	8,437	136	1,016
	high	3.7	0.00732	8,437	229	1,709
Reach 2	low	2.2	0.00732	4,500	72	542
	high	3.7	0.00732	4,500	122	912
Reach 3	low	2.2	0.00732	14,000	225	1,687
	high	3.7	0.00732	14,000	379	2,836
Reach 4	low	2.2	0.00732	18,000	290	2,168
	high	3.7	0.00732	18,000	488	3,647

Formula and Conversion Factor

$Q = KiA$

where Q = Flux;

K = Flow

i = Gradient

A = Area

1 ft^3 = 7.480519 gal (US Liquid)

TABLE 7-5: Porewater Contaminant Mass Flux into Bound Brook Surface Water
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	River Mile	Model Reach	Sample	Total PCB (ng/L)	Groundwater Flux (gal/day) LOW	Groundwater Flux (gal/day) HIGH	Mass Flux (mg/day) LOW	Mass Flux (mg/day) HIGH	Mass Flux (mg/day) AVERAGE
PW01	8.29		PW01-0005	1.6					
PW02	6.63	Reach 1	PW02-0005	10	1016	1709	0.038	0.065	0.052
PW03	6.57	Reach 1	PW03-0005	140	1016	1709	0.54	0.91	0.72
PW03 (Field Duplicate)	6.57	Reach 1	PW33-0005	160	1016	1709	0.62	1.0	0.83
PW04 (Co-located with PW05)	6.54	Reach 1	PW04-0005	32	1016	1709	0.12	0.21	0.17
PW05 (Co-located with PW04)	6.54	Reach 1	PW05-0005	59	1016	1709	0.23	0.38	0.30
PW06 (Co-located with PW07)	6.48	Reach 1	PW06-0005	150	1016	1709	0.58	0.97	0.77
PW07 (Co-located with PW06)	6.48	Reach 1	PW07-0005	200	1016	1709	0.77	1.3	1.0
PW08	6.44	Reach 2	PW08-0005	250	542	912	0.51	0.86	0.69
PW09 (Co-located with PW10)	6.38	Reach 2	PW09-0005	460	542	912	0.94	1.6	1.3
PW10 (Co-located with PW09)	6.38	Reach 2	PW10-0005	660	542	912	1.4	2.3	1.8
PW13 (Co-located with PW14)	6.26	Reach 3	PW13-0005	19000	1687	2836	121	204	163
PW14 (Co-located with PW13)	6.26	Reach 3	PW14-0005	12000	1687	2836	77	129	103
PW16 (Co-located with PW17)	6.21	Reach 3	PW16-0005	270	1687	2836	1.7	2.9	2.3
PW17 (Co-located with PW16)	6.21	Reach 3	PW17-0005	140	1687	2836	0.89	1.5	1.2
PW18	6.16	Reach 3	PW18-0005	90	1687	2836	0.57	0.97	0.77
PW19	6.15	Reach 4	PW19-0005	430	2168	3647	3.5	5.9	4.7
PW20	5.8		PW20-0005	250					
Average (RM6.15 to 6.48)				294	1210	2034	1.2	2.0	1.6
Standard Deviation (RM6.15 to 6.48)				186	614	1032	1.0	1.6	1.3

Note:
Groundwater flux values referenced from Table 7-4

TABLE 7-6: Total PCB Surface Sediment Concentrations (Co-located with Porewater Samples)
Cornell-Dubilier Electronics Superfund Site: OU4 Bound Brook

Location	River Mile	Start Depth (cm)	End Depth (cm)	Total PCB (mg/kg)
PW01	8.29	0	5	0.085
PW02	6.63	0	5	1.4
PW03	6.57	0	5	16
PW03 (Field Duplicate)	6.57	0	5	17
PW04 (Co-located with PW05)	6.54	0	5	2.1
PW05 (Co-located with PW04)	6.54	0	5	2.3
PW08	6.44	0	5	12
PW09 (Co-located with PW10)	6.38	0	5	19
PW10 (Co-located with PW09)	6.38	0	5	12
PW13	6.26	0	5	1300
PW16 (Co-located with PW17)	6.21	0	5	12
PW17 (Co-located with PW16)	6.21	0	5	10
PW18	6.16	0	5	0.53
PW19	6.15	0	5	3.0
PW20	5.8	0	5	5.2

Notes:

1. Total PCB represents the sum of congeners following Method 1668C.
2. Nondetects were incorporated into the summation as zero.
3. Sediment PCB data is not available for locations PW06, PW07, PW11, PW12, PW14, and PW15.